

REMARKS

Claims 1 and 3-12 are pending. Claims 11 and 12 have been added. No new matter has been introduced. Reexamination and reconsideration of the present application are respectfully requested.

In the March 8, 2006 Office Action, the Examiner rejected claims 1 and 3-10 under 35 U.S.C. § 103 (a) as being unpatentable over Suzuki, U.S. Patent No. 5,777,249 (hereinafter Suzuki) in view of Suzuki, et al. U.S. Patent No. 4,916,996 (hereinafter Suzuki et al.). (*March 8 Office Action, page 3*) Applicant respectfully traverses the rejections.

Independent claim 1 recites:

A tone generator system which generates at least one musical tone in response to a channel by using a program number based on tone color changing instruction data designating a tone color of the corresponding channel which is stored in predetermined timing before a sounding instruction data, the tone color changing instruction data including a channel number and a corresponding program number, and the sounding instruction data including the channel number, comprising:

a first waveform storage that stores compressed waveform data, each of the stored compressed waveform data being readable based on the corresponding program number;

a second waveform storage;

a supplying section that supplies the tone color changing instruction data derived from musical composition data to be reproduced, and then supplies the sounding instruction data derived from the musical composition data to be reproduced;

a decoder that is responsive to the tone color changing instruction data supplied from said supplying section, for reading out from said first waveform storage the compressed waveform data based on the program number included in the supplied tone color changing instruction data, and for storing the decoded waveform data in the pulse code modulation format into said second waveform storage, each of the stored decoded waveform data being readable based on the corresponding channel number; and

a tone generator section that is responsive to the sounding instruction data supplied from said supplying section, for reading out from said second waveform storage the waveform data in the pulse code modulation formation, based on the channel number included in the supplied sounding instruction data, and for generating musical tones based on the readout waveform data in the pulse code modulation format.

The Suzuki reference does not disclose, teach or suggest the tone generator

system specified in independent claim 1. As the Examiner has acknowledged, independent claim 1 is distinct from Suzuki because Suzuki does not teach a second waveform storage that is for waveform data in the pulse code modulation format decoded by the first decoder or that the compressed waveform data is read out based on the program number included in the supplied tone color changing instruction.

In addition, unlike the tone generator system specified in independent claim 1, Suzuki does not teach *“a supplying section that supplies the tone color changing instruction data derived from musical composition data to be reproduced, and then supplies the sounding instruction data derived from the musical composition data to be reproduced.”*

Instead, Suzuki is directed to electronic musical instruments which synthesize musical tones based on waveform information stored in waveform memories. (*Suzuki; Abstract; and Col. 1, lines 7-9*) Suzuki discloses an electronic musical instrument with a function for recording and reproducing musical tones using compressed waveform data. (*Suzuki; Col. 2, lines 48-64*) The control section CONT which receives the performance-designating signal PLAY, produces read/write (R/W) control signals and addresses MA for the excitation waveform memory DM in a read mode. During the read mode, the excitation-waveform data of c bits are read from the area designated by the address MA in the excitation-waveform memory DM and supplied to a second decoder DEC2 as a read waveform MW. In the second decoder DEC2, the read data are expanded to original data DW of m bits which are introduced into the second loop circuit through a second adder ADD3 as a signal exciting the second loop circuit. (*Suzuki; Col. 5, lines 5-17*) Thus, Suzuki discloses that the excitation-waveform data of c bits are read from the

area in the excitation waveform memory DM, based on the R/W control signal produced by the control section CONT which has received the performance-designating signal PLAY for the tone-color-setting section TS, and the read data are expanded to original data DW of m bits by the second decoder DEC2.

However, Suzuki fails to disclose, teach, or suggest that the tone color changing instruction data is previously supplied and subsequently the sound instruction data is supplied. Therefore, Suzuki fails to disclose, teach, or suggest, *“a supplying section that supplies the tone color changing instruction data derived from musical composition data to be reproduced, and then supplies the sounding instruction data derived from the musical composition data to be reproduced.”*

Further, Suzuki fails to disclose, teach, or suggest that the decoder decodes the readout compressed waveform data into waveform data in a pulse code modulation format in response to the tone color changing instruction data supplied prior to the sound instruction data, because Suzuki does not use the tone color changing instruction data supplied prior to the sounding instruction data. Accordingly, Applicant respectfully submits that independent claim 1, distinguishes over Suzuki.

Suzuki et al. does not make up for the deficiencies of Suzuki. Suzuki et al. discloses compressing waveform data representative of attack portions of waveform data used for generating musical tones and storing the compressed waveform data into a memory. For example, in Suzuki et al., after a key-depression detecting circuit 138 outputs a key-on signal KON, sum data (the sum data of the start address SA and the count data from an address counter 140) is outputted to the data memory 135 as address data AD, the data memory successively outputs the quantized difference code C(n) of the

attack portions ATC (i.e. compressed data representative of attack portions of musical tone waveforms) to the decoding circuit. (*Suzuki et al.*; Col. 16, line 44 – Col. 17, line 24)

Further, a touch detecting circuit 137 detects a touch intensity of the depressed key and generates touch data TD corresponding to the detected touch intensity, and the key-depression detecting circuit 138 outputs a key code KC of the depressed key and a key-on signal KON when a key is detected to be depressed (*Suzuki et al.*; Col. 11, lines 32 – 35 and 53-59) A tone-color selecting circuit 142 outputs a tone code TC corresponding to a presently selected tone color (*Suzuki et al.*; Col. 12, lines 11 – 13) The key code KC; the tone code TC, and the touch data TD are supplied to a start address memory 143 or a repeat address memory 144. When the key code KC, the tone code TC, and the touch data TD are supplied to the start address memory 143, the start address memory 143 reads out and outputs start address data SA indicating the head address of the musical tone waveform corresponding to the above supplied data. (*Suzuki et al.*; Col. 12, lines 16 – 21) When the key code KC, the tone code TC, and the touch data TD are supplied to the repeat address memory 144, the repeat address memory 144 reads out and outputs repeat address data RA indicating the address storing the repeat data of the musical tone waveform corresponding to the above supplied data. (*Suzuki et al.*; Col. 12, lines 26 – 31) The data representative of musical tone waveforms are read out from the data memory 135, based on the start address data SA and the repeat address data RA.

Thus, Suzuki et al. discloses that reading out the compressed data representative of attack portions of musical tone waveforms or the data representative of musical tone waveforms based on a key-depression operation (i.e., generation of key-on data) in a

manual mode of the electronic musical instruments. However, Suzuki et al. fails to disclose, teach, or suggest generating musical tones based on the sound instruction data and the tone color changing instruction data which is stored before the sound instruction data. Specifically, Suzuki fails to disclose, teach, or suggest supplying the tone color changing instruction is supplied before the sounding instruction data is supplied. Thus, the combination of Suzuki and Suzuki et al., does not disclose, teach or suggest “*a supplying section that supplies the tone color changing instruction data derived from musical composition data to be reproduced, and then supplies the sounding instruction data derived from the musical composition data to be reproduced.*”

Further, the combination of Suzuki and Suzuki et al. also does not disclose, teach, or suggest “*a decoder that is responsive to the tone color changing instruction data supplied from said supplying section.*” Accordingly, Applicant respectfully submits that independent claim 1, distinguishes over Suzuki in combination with Suzuki et al.

Claims 5 and 6 recite limitations similar to those in independent claim 1. Accordingly, Applicant respectfully submits that claims 5 and 6 distinguish over Suzuki in combination with Suzuki et al. for reasons similar to those set forth above with respect to independent claim 1.

Claims 3-4, 7-8, and 9-10 depend from independent claims 1, 5, and 6, respectively. Accordingly, Applicant respectfully submits that claims 3-4, 7-8, and 9-10 distinguish over Suzuki in combination with Suzuki et al. for the same reasons set forth above with respect to independent claims 1, 5, and 6, respectively.

Independent claim 11 recites:

A tone generator system which generates at least one musical tone in response to a channel by using a program number based on tone color changing instruction data

designating a tone color of the corresponding channel which is stored in predetermined timing before a sounding instruction data, the tone color changing instruction data including a channel number and a corresponding program number, and the sounding instruction data including the channel number, comprising:

- a first waveform storage that stores compressed waveform data, each of the stored compressed waveform data being readable based on the corresponding program number;

- a second waveform storage;

- a supplying section that supplies the tone color changing instruction data derived from musical composition data to be reproduced, and then supplies the sounding instruction data derived from the musical composition data to be reproduced;

- a decoder that is responsive to the tone color changing instruction data supplied from said supplying section, for reading out from said first waveform storage the compressed waveform data based on the program number included in the supplied tone color changing instruction data, ***for decoding the readout compressed waveform data into waveform data in a pulse code modulation format based on the tone color changing instruction data***, and for storing the decoded waveform data in the pulse code modulation format into said second waveform storage, each of the stored decoded waveform data being readable based on the corresponding channel number; and

- a tone generator section that is responsive to the sounding instruction data supplied from said supplying section, for reading out from said second waveform storage the waveform data in the pulse code modulation formation, based on the channel number included in the supplied sounding instruction data, and for generating musical tones based on the readout waveform data in the pulse code modulation format.

The combination of Suzuki and Suzuki et al., does not disclose teach or suggest the tone generator system specified in independent claim 11. Independent claim 11 recites limitations similar to those in independent claim 1. Accordingly, Applicant respectfully submits that claim 11 distinguishes over the combination of Suzuki and Suzuki et al. for reasons similar to those set forth above with respect to claim 1.

In addition, the combination of Suzuki and Suzuki et al. fails to disclose, teach, or suggest a decoder “***for decoding the readout compressed waveform data into waveform data in a pulse code modulation format based on the tone color changing instruction data.***” Accordingly, Applicant respectfully submits that claim 11 distinguishes over the combination of Suzuki and Suzuki et al.

Independent claim 12 recites similar limitations to those in independent claim 11.

Accordingly, Applicant respectfully submits that claim 12 distinguishes over the combination of Suzuki and Suzuki et al. for reasons similar to those set forth above with respect to claim 11.

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Applicant believes that the claims are in condition for allowance. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California

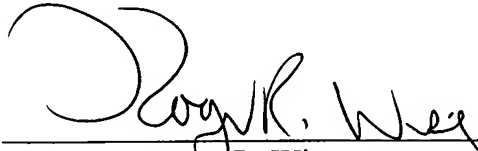
telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference call would advance prosecution of the application.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

Date: July 10, 2006

By: _____



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